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PAPERING THE GARDEN

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A radio talk by Dr. L. H. Flint, Bureau of Plant Industry, Department of Agriculture, through WRC and 15 other stations associated with the National Broadcasting Company, at 1:22 p.m., Friday, March 15, 1929.

Fifteen years ago a Hawaiian planter conceived an idea which within less than a decade was enabling planters of the island literally to make money out of paper.

The planter was C. F. Eckart, superintendent of a sugar plantation. His idea was the use of a blanket of heavy paper to keep down weeds in the cane fields. But the plan found its greatest use and value in the pineapple industry. It was found that the heavy, asphalt-saturated paper did more than stifle the weeds. It stimulated the growth of plants by conserving moisture and raising soil temperature.

So the pineapple industry started papering its fields. It is estimated that more than 90 per cent of Hawaiian pineapple fields now are paper mulch. It is estimated also that the mulch-grown crop is one-third larger than a crop grown on the same land, unmulched, would be.

Naturally, the success of paper mulch in Hawaii aroused interest in its possibilities in the United States. Five years ago the Department of Agriculture started small trials with mulch paper. The experiments have continued, and have been enlarged in each succeeding year. By the end of 1927 season we knew that the black paper blankets gave comfort and aid to a wide variety of crops. In 45 out of 47 trials, the mulch increased crop yields.

Last year a large number of interested growers in the United States and Canada started out to see for themselves if this new plan would make the seed catalog pictures come true.

Vegetable and truck growers producing for the early market are hoping that paper mulch will hasten maturity and thus get their produce to market sooner. Florists are interested in the possibility of larger blooms and longer stems on the cut flowers and pot plants.

Nurserymen see visions of reducing the period required to grow their stock out to selling size. Fruit growers foresee paper mulch hastening new orchards and vineyards into commercial bearing. Home gardeners-- and I suppose they are in the majority in this audience today-- expect a summer vacation when the black paper blanket takes up the white man's burden of maintaining a domineering attitude over weeds.

But none of the results obtained by the Department of Agriculture or by men who have tried out the paper mulch system on their own accounts

should be taken as positive proof that these scraps of paper are going to bring on an agricultural revolution. Hawaiian pineapple growers spent half a dozen years in adapting paper mulch to their crop. In the hands of practical growers of our varied crops the system is but a year old. For that reason it isn't surprising that as yet we know little about suitable types of paper, the best methods of applying them, or the likelihood of profits from using them.

Last year's trials, however, established the fact that throughout the United States paper mulch may be effective in stimulating the growth of plants. Now we must set to work to find out whether the increased growth and yield and the other advantages will give a profit on papering the garden or the field.

The United States Department of Agriculture is going ahead with experiments which will be repeated season after season under different conditions. More and more growers each year will undoubtedly try out the paper mulch system on a small scale to find out how it will work for them.

We have much to learn. Paper mulch increases soil temperature and some plants may prefer it cool. Paper mulch preserves soil moisture and some plants may vote dry. Paper mulch costs money and some crops will refuse to pay the bill.

We have just begun to find out the principles of papering the garden or the field. Perhaps some of you will want to join the research class this season. For your benefit, and to satisfy the curiosity of everybody who wants to know what paper mulch is, I'll take the remaining time to describe the materials and methods briefly.

Two types of mulching paper have been developed -- Type A and Type B. Both are black and both shed water and absorb sun heat. Type A is more durable and costs less than Type B. Naturally, A is used to mulch one crop for one season, and B is used when a more permanent mulch is wanted.

There are three ways of applying the paper. One is to set the plants in the center of three-foot-square pieces of Type A paper, held down with soil at the edges. The squares cost about two cents each. They are used for such crops as melons, cucumbers, squashes, etc. Three-foot squares of Type B paper are used in this way about young orchard trees or grape vines when they are first set out.

A method of papering fields of tomatoes, cabbage, egg plant, etc., is to spread Type A paper in three-foot-wide strips down the whole length of the plant bed. Each strip covers a slight ridge and is held down with soil at the edges. The plants are set through the paper at the crest of the ridge. The uncovered space between the strips of paper is machine weeded.

The third method is followed in growing the home garden nursery stock, and drilled crops. Under this plan, strips of 18-inch paper are spread on each side of the plant row, with just enough space between for the plants. The strips are held down with wire staples, stapled laths, edgings, or other material.

Anyone going in for paper mulch should, as I have said, try it out on a small scale. I hope that all who do make the trial will find that plants don't need such liberal applications of elbow grease to keep them happy and prosperous as they used to. It may be that we shall discover that all plants need for their comfort is an extra blanket -- paper mulch; that this comfort makes plants yield more heavily; and that the term "mulch-grown" will come to symbolize the prize products of pampered plants.

